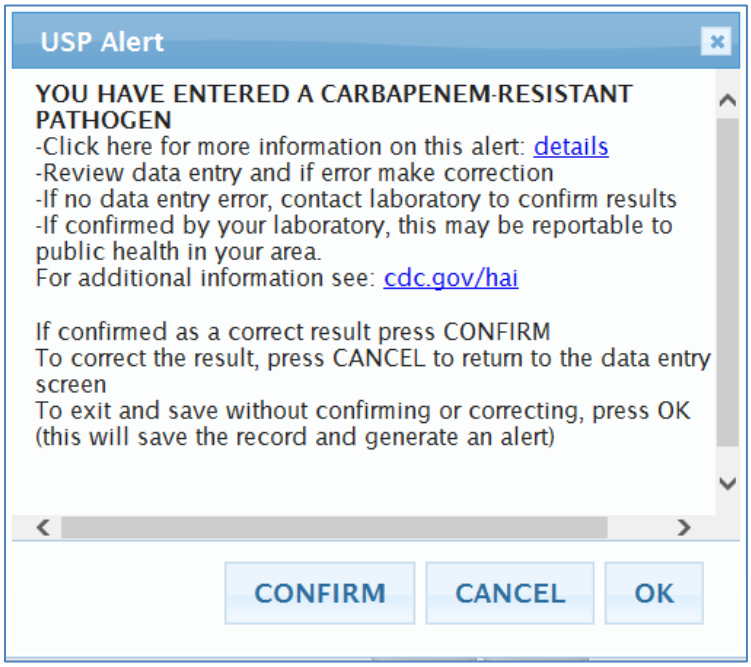
Unusual Susceptibility Profiles Alert

National Healthcare Safety Network (NHSN) is a surveillance system for healthcare-associated infections (HAIs) that includes data collection on antimicrobial susceptibility testing results for certain reported pathogens. Microorganisms with specific resistance patterns are of epidemiological significance and can have substantial infection control implications. The importance of early detection and implementation of intervention measures to prevent transmission and propagation cannot be understated. Redundancy across many systems to ensure identification of these important unusual susceptibility profiles is beneficial. Beginning in the summer of 2014, NHSN will notify users when any of the twelve unusual susceptibility profiles listed below and further described in the Unusual Susceptibility Profiles Alert Table (found at the end of document) are reported to NHSN. This will apply to in-plan events only.

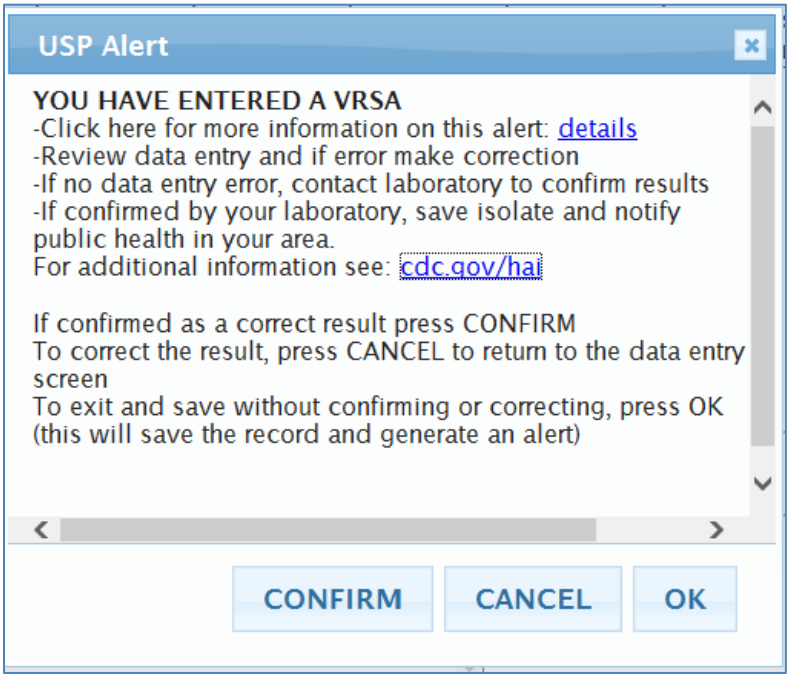
1. Carbapenem-intermediate or -resistant Enterobacteriaceae
2. Carbapenem-intermediate or -resistant *Acinetobacter baumannii*
3. Carbapenem-intermediate or -resistant *Pseudomonas aeruginosa*
4. Highly Drug-Resistant Enterobacteriaceae
5. Highly Drug-Resistant *Pseudomonas aeruginosa*
6. Highly Drug-Resistant *Acinetobacter baumannii*
7. Colistin/Polymyxin B-resistant *Acinetobacter baumannii*
8. Colistin/Polymyxin B-resistant *Pseudomonas aeruginosa*
9. Daptomycin non-susceptible and Linezolid-resistant *Enterococcus* spp.
10. Vancomycin-resistant *Staphylococcus aureus* (VRSA)
11. Daptomycin non-susceptible and Linezolid-resistant and Vancomycin-intermediate *Staphylococcus aureus*
12. Vancomycin-resistant *Staphylococcus,* coagulase negative (VRSE)

When a user enters a pathogen's susceptibility testing result into the NHSN application that aligns with one of the unusual susceptibility profiles, upon saving the event, a "pop-up" message will appear on the screen. The message text will be tailored to the specific profile identified. There are three message types.

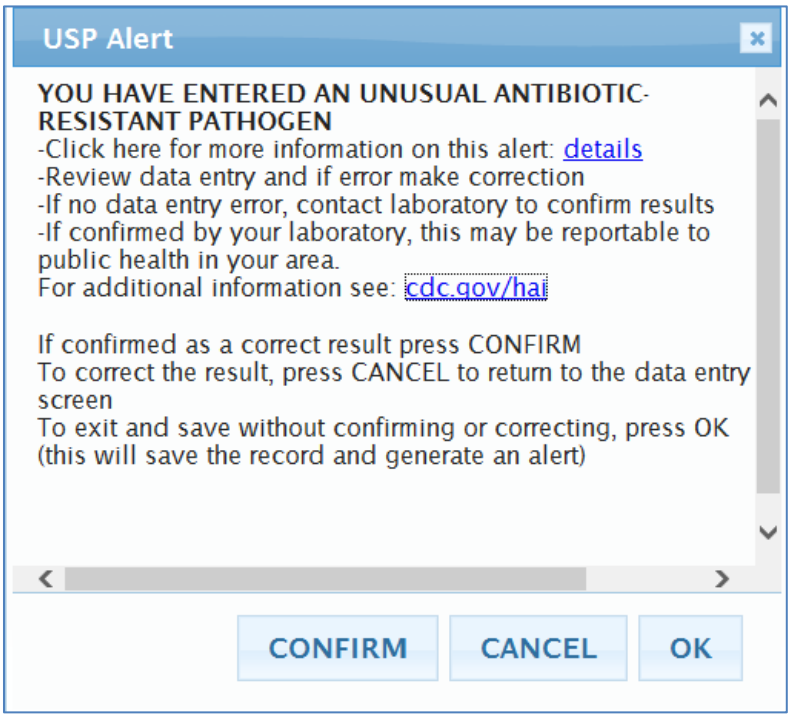
1. **CR** (Carbapenem-Resistant)



2. **VRSA** (Vancomycin-Resistant *Staphylococcus aureus*)

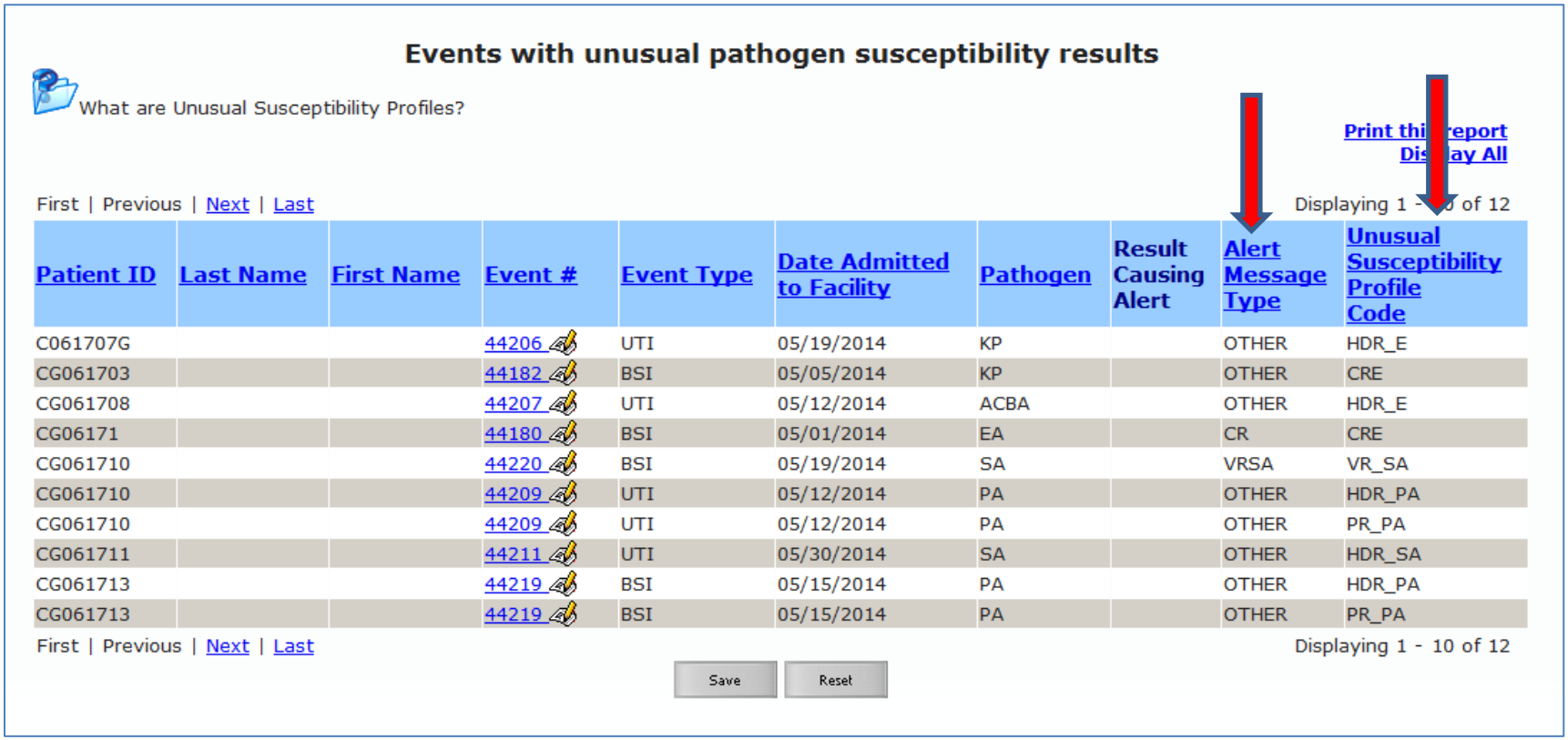


3. **Other**



When a message appears the user will have the ability to do one of the following:

- Verify the data entry as accurate by selecting “Confirm.” This will complete the “Save” process.
- Return to the event susceptibility data entry screen by choosing “Cancel.” The user can review and amend incorrect data entry if necessary.
- Acknowledge the notification by selecting “OK.” This selection will enable the user to complete the “Save” process without verifying or editing the data entry. This will generate an Alert on the Alerts screen. The Alert will appear under the Alert tab labeled “Unusual Susceptibility Profile” and will display the type of Alert message, as well as, the profile identified. The user will have the ability to return to the event susceptibility data entry screen at a later point in time, directly from the Alert tab. The Alert will remain until the unusual susceptibility profile is verified to be accurate by selecting “Confirm” or amending the data entry such that an unusual susceptibility profile is no longer identified.



Events with unusual pathogen susceptibility results

What are Unusual Susceptibility Profiles?

Print this Report
Display All

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Patient ID	Last Name	First Name	Event #	Event Type	Date Admitted to Facility	Pathogen	Result Causing Alert	Alert Message Type	Unusual Susceptibility Profile Code
C061707G			44206	UTI	05/19/2014	KP		OTHER	HDR_E
CG061703			44182	BSI	05/05/2014	KP		OTHER	CRE
CG061708			44207	UTI	05/12/2014	ACBA		OTHER	HDR_E
CG06171			44180	BSI	05/01/2014	EA		CR	CRE
CG061710			44220	BSI	05/19/2014	SA		VRSA	VR_SA
CG061710			44209	UTI	05/12/2014	PA		OTHER	HDR_PA
CG061710			44209	UTI	05/12/2014	PA		OTHER	PR_PA
CG061711			44211	UTI	05/30/2014	SA		OTHER	HDR_SA
CG061713			44219	BSI	05/15/2014	PA		OTHER	HDR_PA
CG061713			44219	BSI	05/15/2014	PA		OTHER	PR_PA

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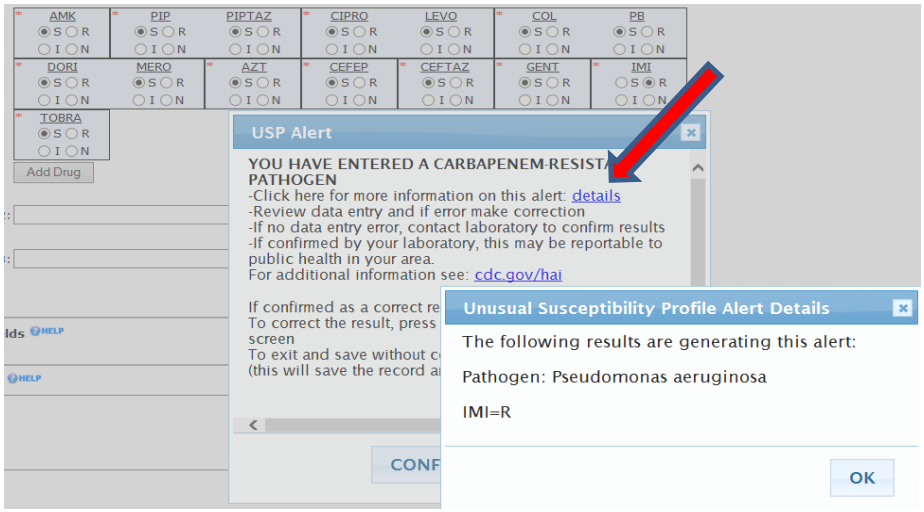
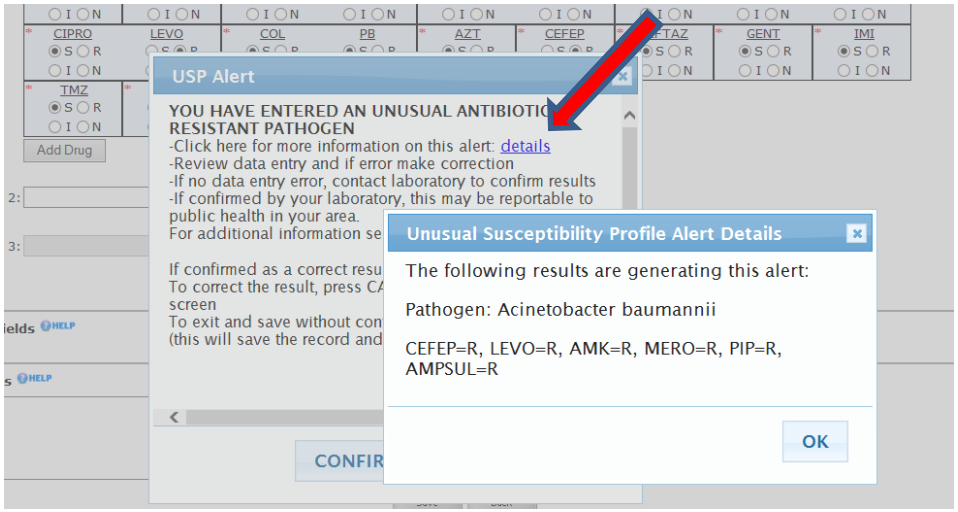
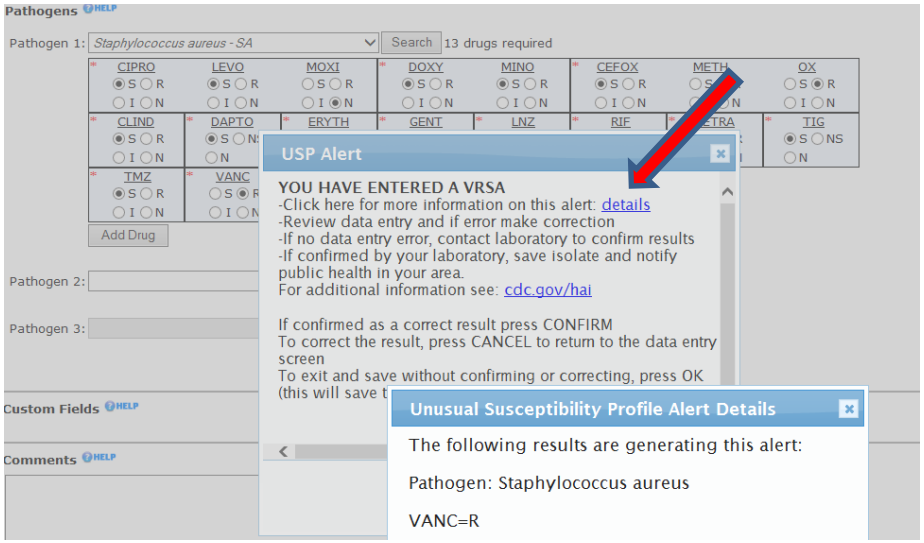
Save Reset

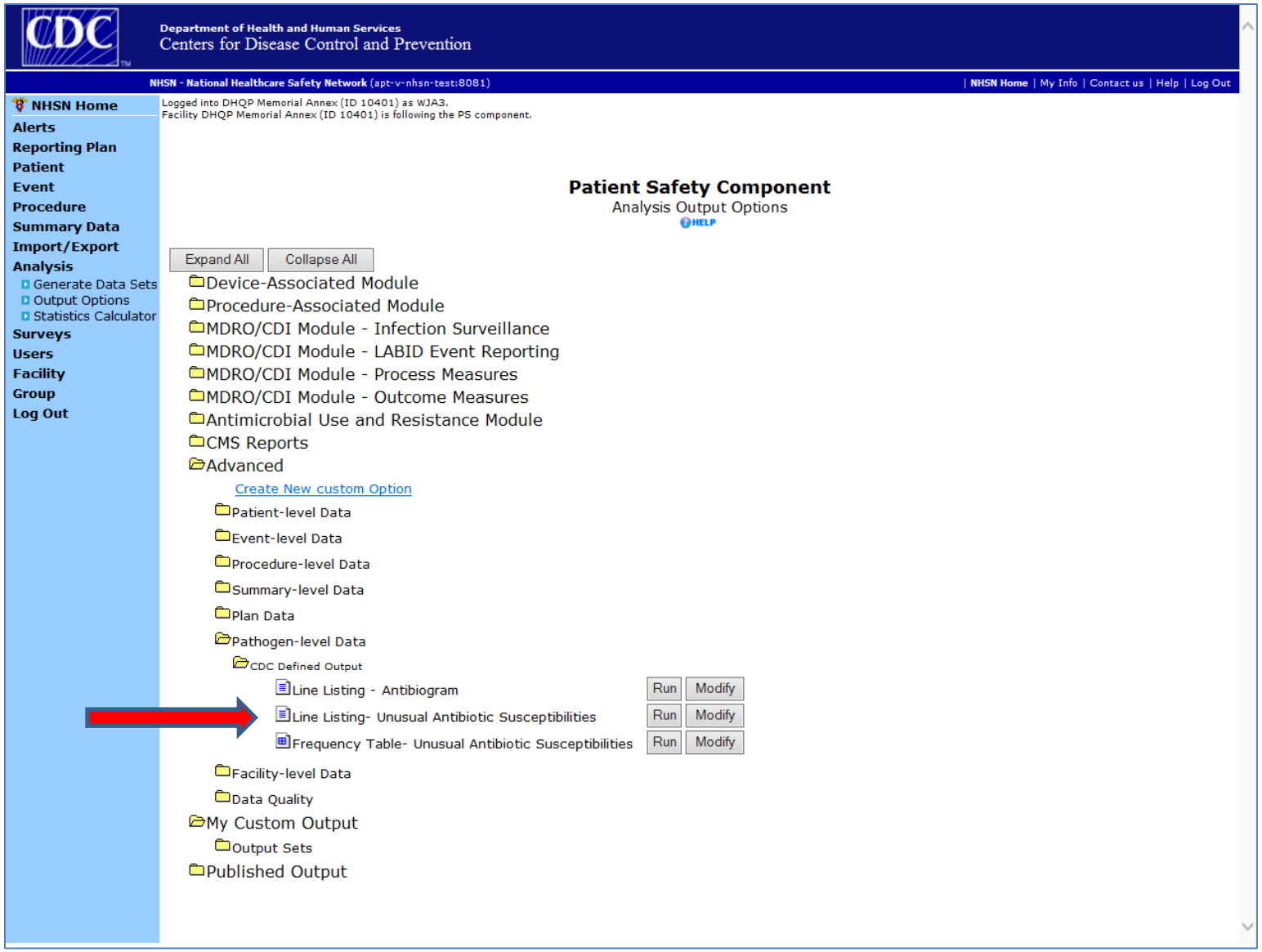
When an Unusual Susceptibility Profile Alert "pop-up" message appears the user can select the "details" link to gather additional information.







The user will be able to generate line list and frequency table outputs in Analysis. The output option can be found in the Advanced folder within the Pathogen-level Data sub-folder. The output will identify the profiles identified, the number of each, and in addition, whether the profile has been verified to be accurate or if the profile is pending verification.



Unusual Susceptibility Profiles Alert Table

Unusual Susceptibility Profiles	Profile Codes	Definition of Unusual Susceptibility Profiles	Alert Message Type
Carbapenem-intermediate or -resistant Enterobacteriaceae	CRE	Carbapenem (imipenem, meropenem, doripenem, ertapenem) is Intermediate(I) or Resistant(R)	CR
Highly Drug-Resistant Enterobacteriaceae	HDR_E	Defined as highly drug-resistant if all **five** drug classes have at least one drug within the class reported as either Intermediate(I) or Resistant(R): • Extended spectrum cephalosporin (cefepime, cefotaxime, ceftriaxone, ceftazidime) • Fluoroquinolones (ciprofloxacin, levofloxacin, moxifloxacin) • Aminoglycosides (amikacin, gentamicin, tobramycin) • Carbapenems (imipenem, meropenem, doripenem, ertapenem) • Piperacillin/tazobactam	Other
Colistin/Polymyxin B-resistant *Pseudomonas aeruginosa*	PR_PA	Colistin/polymyxin B is Intermediate(I) or Resistant(R)	Other
Carbapenem-intermediate or -resistant *Pseudomonas aeruginosa*	CR_PA	Carbapenem (imipenem, meropenem, doripenem) is Intermediate(I) or Resistant(R)	CR
Highly Drug-Resistant *Pseudomonas aeruginosa*	HDR_PA	Defined as highly drug-resistant if all **five** drug classes have at least one drug within the class reported as either Intermediate(I) or Resistant(R): • Extended spectrum cephalosporin (cefepime, ceftazidime), • Fluoroquinolones (ciprofloxacin, levofloxacin) • Aminoglycosides (amikacin, gentamicin, tobramycin) • Carbapenems (imipenem, meropenem, doripenem) • Piperacillin or piperacillin/tazobactam	Other
Colistin/Polymyxin B-resistant *Acinetobacter baumannii*	PR_ACBA	Colistin/polymyxin B is Resistant(R)	Other
Carbapenem-intermediate or -resistant *Acinetobacter baumannii*	CR_ACBA	Carbapenem (imipenem, meropenem, doripenem) is Intermediate(I) or Resistant(R)	CR
Highly Drug-Resistant *Acinetobacter baumannii*	HDR_ACBA	Defined as highly drug-resistant if all **six** drug classes have at least one drug within the class reported as either Intermediate(I) or Resistant(R): • Extended spectrum cephalosporin (cefepime, ceftazidime), • Fluoroquinolones (ciprofloxacin, levofloxacin) • Aminoglycosides (amikacin, gentamicin, tobramycin) • Carbapenems (imipenem, meropenem, doripenem) • Piperacillin or piperacillin/tazobactam • Ampicillin/sulbactam	Other
Daptomycin non-susceptible and Linezolid-resistant *Enterococcus* spp.	HDR_ENTSP	Daptomycin is Non Susceptible(NS) AND Linezolid is Resistant(R)	Other
Vancomycin-resistant *Staphylococcus aureus* (VRSA)	VR_SA	Vancomycin is Resistant(R)	VRSA
Daptomycin non-susceptible and Linezolid-resistant and Vancomycin-intermediate *Staphylococcus aureus*	HDR_SA	Daptomycin is Non Susceptible(NS) AND Linezolid is Resistant(R) AND Vancomycin is Intermediate(I)	Other
Vancomycin-resistant *Staphylococcus*, coagulase negative (VRSE)	VR_CSN	Vancomycin is Resistant(R)	Other